



## CHAPTER 2 - DESCRIPTION OF ALTERNATIVES

The purpose of this chapter is to describe two "Action" alternatives and one "No Action" alternative for the proposed action of developing and implementing the Necedah National Wildlife Refuge Comprehensive Conservation Plan (CCP). It should be noted that in describing each alternative, specific attention was paid to the needs and significant issues identified through internal and external scoping.

### \*\*\*CHAPTER HIGHLIGHTS\*\*\*

- ! A Description of Elements Common to all Alternatives
- ! A Description of Alternatives, including the No Action Alternative
- ! A Summary and Comparison of Alternatives

### 1. ELEMENTS COMMON TO ALL ALTERNATIVES

The following considerations apply to all future actions, regardless of the specific goals, objectives, strategies, and projects that will be used in pursuit of the vision for the Refuge.

#### 1.1 Archaeological and Cultural Values

Archaeological and cultural resources are important parts of our Nation's natural heritage. The Service is committed to protecting valuable records of human interactions with each other and the landscape. This is done in conjunction with its more widely recognized mission of protecting fish, wildlife, and plant resources.

To date, archeological investigations have only addressed 2 percent of land within the Refuge. Surveys and other sources have identified 27 prehistoric and historic sites within the Refuge. Prehistoric mounds, including effigy mounds, have been reported near the Refuge, many of them near the Yellow River.

Indian tribes may have interest in the Refuge area in terms of traditional cultural properties and sacred sites, as well as claims to human remains, funerary objects, and other cultural items. Modern tribes with possible prehistoric and historic connections to the Refuge area include the Menominee, the Winnebago or Ho-Chunk, the Potawatomi, the Sauk and Fox, the Kickapoo, the Miami, and Mascouten.

The Refuge Manager will provide a description of projects on the Refuge to the Regional Historic Preservation Officer, who will analyze the undertakings for potential effect on historic properties. The Regional Historic Preservation Officer will enter into consultation with the State Historic Preservation Officer and other parties as appropriate. No undertakings will proceed until the Section 106 process is completed. As such, the Refuge Manager will notify the Regional Historic Preservation Officer early in the planning for all projects or activities potentially affecting archaeological and cultural resources on Refuge land.



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### 1.2 Hydrology and Drainage

It is Service policy not to impede the flow of waters from other lands, even if that flow passes through lands acquired by the Service. The Service will not cause any artificial increase of natural water levels, width, or flow of waters without ensuring that impacts would be limited to those lands in which the Service acquires an appropriate management interest. Site-level studies and detailed planning will be performed prior to the Service undertaking any management activity affecting drainage of private land. If the Service does inadvertently create a water-related problem for any private landowner (flooding, soil saturation, increase in water table height, etc.), the problem will be corrected by the Service at the Service's expense. The Refuge will continue to maintain ditches and water control structures that influence water access and use downstream. The Refuge will also continue to document water rights and use to protect water resources for the benefit of fish, wildlife, plants and public use of Refuge water-dependent resources.

### 1.3 Landowner Rights Adjacent to Refuge Lands

Service or other agency control of access, land use practices, water management practices, hunting, fishing, and general use next to any tracts owned by the Service is limited only to those lands in which the Service or other entities have acquired that ownership interest (the Service acquires land through purchase, donation, or other means of conveyance). Any landowners adjacent to lands owned by the Service retain all the rights, privileges, and responsibilities of private land ownership.

### 1.4 Service Land Acquisition Policy

The U.S. Fish and Wildlife Service acquires lands and interests in lands consistent with legislation or other Congressional guidelines and Executive Orders, for the conservation of fish and wildlife and to provide wildlife-dependent public use for educational and recreational purposes. The Service policy is to acquire land only when other protective means, such as zoning or regulation, are not appropriate, available, or effective. When the Service acquires land, it acquires fee title (all property rights) only if lesser property interests (such as conservation easements, leases, or cooperative agreements) are not suitable to achieve resource objectives.

It is Service policy to acquire the minimum interest necessary to reach project goals and objectives. Any Service acquisition of lands, regardless of the type (easement or fee-title purchase) will be from willing sellers only. Written offers to willing sellers will be based on a professional appraisal of the property using recent sales of comparable properties in the area. Landowners will in no way be coerced into selling their land or any interest in their land. The Service recognizes that every landowner within or adjacent to an existing or proposed National Wildlife Refuge has the following rights:

- The right to retain all privileges and responsibilities of private ownership.
- The right to sell their land to anyone of their choice.
- The right not to sell their land.



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- The right to receive a fair market offer for any property sought for purchase by the U.S. Fish and Wildlife Service.
- The right to control access on their land.
- The right to be heard and to provide input on management plans for neighboring refuge lands.
- The right to be informed on a regular basis about refuge management activities.

No instances of uneconomic remnants will occur as a result of the Service's land acquisition program under any of the Action alternatives. 49 CFR Part 24.102 (k) prohibits the Federal Government from creating uneconomic remnants. If such a remnant were to occur, the Service would offer to purchase the remnant at market value, along with the portion of the property needed for the project. The Service would pay for necessary title evidence, mortgage prepayment penalties, mortgage releases, boundary surveys, recording fees, and similar expenses incidental to the transfer of title. It would not pay for fees charged by an attorney who was hired by the landowner.

The uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), provides for certain relocation benefits to home owners, businesses, and farm operators who choose to sell and relocate as a result of federal land acquisition. The law provides for benefits to eligible owners and tenants in the following areas:

- Reimbursement of reasonable moving and related expenses;
- Replacement housing payments under certain conditions;
- Relocation assistance services to help locate replacement housing, farm, or business properties;
- Reimbursement of certain necessary and reasonable expenses incurred in selling real property to the government.

The Refuge Revenue Sharing Act of June 15, 1935, as amended, provides for annual payments to counties or the lowest unit of government that collects and distributes taxes based on acreage and value of National Wildlife Refuge lands located within the county. The monies for these payments come from two sources: (1) net receipts from the sale of products from National Wildlife Refuge System lands (oil and gas leases, timber sales, grazing fees, etc.) and (2) annual Congressional appropriations. Annual Congressional appropriations, as authorized by a 1978 amendment, were intended to make up the difference between the net receipts from the Refuge Revenue Sharing Fund and the total amount due to local units of government. Annual payments are calculated based on which of the following formulas, as set out in the Act, provides the largest return: (1) \$.75 per acre; (2) 25 percent of the net receipts collected from refuge lands in the county; or (3) 3/4 of 1 percent of the appraised value. In Wisconsin 3/4 of 1 percent of the appraised value always brings the greatest return to the taxing bodies. Using this method, lands are re-appraised approximately every 5 years to reflect current market values.



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### 1.5 Maintenance of Roads and Existing Right-of-Ways

State, county, and townships retain maintenance obligations for roads and their rights-of-way under their jurisdiction within refuge boundaries. Some township roads may be suited for abandonment (but not necessarily closure) and their maintenance assumed by the Service. Any such abandonments would only be with the consent of the appropriate governing body. Existing rights-of-ways and terms of other easements will continue to be honored. New rights-of-ways and easements will be considered in relation to Refuge System regulations and likely impacts of the rights-of-way or easement to Refuge resources.

The Refuge will cooperate with state, county and township officials in the maintenance of roads that cross the Refuge. Roadside mowing will be completed in accordance with State and local laws.

### 1.6 Environmental Justice

Environmental justice refers to the principle that all citizens and communities are entitled to:

- Equal protection from environmental and occupational health or safety hazards;
- Equal access to natural resources; and
- Equal participation in the environmental and natural resource policy formulation process.

On February 11, 1994, President Clinton issued Executive Order 12898 - "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations." The purpose of this Order was to focus the attention of federal agencies on human environmental health and to address inequities that may occur in the distribution of costs/benefits, land use patterns, hazardous material transport or facility siting, allocation and consumption of resources, access to information, planning, and decision making, etc.

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people. The developing environmental justice strategy of the Service extends this mission by seeking to ensure that all segments of the human population have equal access to America's fish and wildlife resources, as well as equal access to information that will enable them to participate meaningfully in activities and policy shaping.

Within the spirit and intent of Executive Order 12898, no minority or low income populations would be impacted by any Service action under any alternative.



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### 1.7 Timber Harvest

Timber harvest is an important tool used to accomplish Refuge ecological objectives. In recent years, the Refuge has conducted approximately two to four timber sales per year. Sales usually are between 40 and 400 acres. Jack pine, red pine, aspen, and Northern pin oak (Hill's oak) are the species with the greatest quantities harvested. Under all circumstances, the following guidelines will apply:

- Timber will be cut and removed from the Refuge by private wood contractors.
- Archeological surveys will be done before any timber removal operations take place. The surveys will be funded by the timber sale and reflected in the bid price for the timber. When no other source of funding is available and it is imperative that the timber be cut, the Refuge will support the cost of the survey. Archaeological surveys are required if any part of the timber harvest operation will disrupt the soil to a depth of 6 inches or more. If haul roads and/or yarding areas are to be constructed, an archaeological survey will be required in those areas.
- Refuge roads used for haul routes by contractors will be rehabilitated by grading and 4 inches of gravel, at the completion of the logging operation.
- The method for selecting the contractor for large sales over 500 cords shall be by sealed bid.
- Whenever possible, the establishment of firebreaks will be written in as part of the timber sale.
- All timber sales are designed to accomplish specific habitat objectives. Therefore, the sale price may be significantly lower for Refuge sales than comparative sales on private or other land.
- A timber sale appraisal report will be prepared in triplicate for each sale by Refuge staff for approval by the Refuge Manager. The report will clearly indicate the cutting area, amount of timber to be harvested, and species involved. The method of harvest, harvest objectives as related to wildlife habitat improvement, stumpage prices, scale provisions, method of payment, and other special requirements will also be included.
- Contractors are generally allowed one to two years to complete each sale; with most harvesting is done during the winter months when the ground is frozen to prevent damage to soil, vegetation, and archaeological resources.
- No harvesting will be allowed in areas where Northern pin oak is present during the months of April through July when trees may be infected with the oak wilt fungus.



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### 1.8 Fire

As stated in Chapter 1, a need for this EA is to adopt the Refuge's Fire Management Plan through this EA. As such, this EA will provide the National Environmental Policy Act compliance for the use of prescribed fire on the Refuge as well as future activities associated with fire prevention, detection, and suppression.

#### Prescribed Fire

Prescribed fire has been a habitat management tool used on the Refuge since 1944. Refuge staff annually burn an average of 2,000 acres of Refuge land to enhance habitat for upland game, waterfowl, and endangered species. The periodic burning of savannas, grasslands, and sedge meadows reduces encroaching vegetation such as oak sprouts and willow. It also encourages the growth of species like blueberry, raspberry, and wild lupine (a plant necessary for the survival of the endangered Karner blue butterfly).

All prescribed burns are carried out by highly trained and qualified personnel who perform the operation under very precise plans. No burning takes place unless it meets the qualifications of the prescription for each unit. A prescription is a set of parameters that define the air temperature, fuel moisture, wind direction and velocity, soil moisture, relative humidity, and several other environmental factors under which a prescribed burn may be ignited. This insures that there is minimal chance the fire will escape the unit boundaries and that the fire will have the desired effect on the plant community.

Prescribed burns will be conducted within or near Refuge development zones, sensitive resources, and boundary area to reduce the risk from wildfire damage. To the greatest extent possible, hazard reduction prescribed fires will only be used when they compliment resource management objectives.

Burn frequency will vary from every 3 to 5 years or longer on established oak savanna units dependent on management objectives, historic fire frequency, and funding. As part of the prescribed fire program, a literature search will be conducted to determine the effects of fire on various plant and animal species, and a monitoring program will be instituted to verify that objectives are being achieved.

Prescribed fires cannot and will not be ignited when the area is at an extreme fire danger level and/or the National Preparedness level is V, without the approval of the Regional Fire Management Coordinator. In addition, the Refuge will not ignite prescribed fires when adjacent counties or the State of Wisconsin have instituted burning bans without Wisconsin DNR concurrence.

Drought can have an effect on fire severity and control. One or more drought indicators (PDI - KBI) will be used to determine the degree of drought. These indicators can be accessed on the web at <http://www.boi.noaa.gov/fwweb/fwoutlook.htm>



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Spot fires, slop-overs, and escapes can be an expected occurrence on any prescribed fire. They can be caused by any of a number of factors that can not always be accounted for in the planning process. A few minor occurrences of these events on a prescribed burn can usually be controlled by holding forces of the burn crew. If so, they do not constitute a wildfire. The burn boss is responsible for evaluating the frequency and severity of these events and taking mitigating measures such as slowing down or stopping the burn operation, ordering additional holding forces from within Refuge Staff, or taking measures to extinguish the prescribed burn. Should an escape event exceed the ability of existing holding forces to control, and additional assistance become necessary in the form of DNR involvement, the event will be classified a wildfire and controlled accordingly. Once controlled by these forces the prescribed burning operation will be stopped for the burning period. A fire number will be obtained to implement wildfire funding to cover the cost of control, a wildfire report will be generated and a Wildland Fire Situation Analysis will be prepared.

Prescribed burns can be conducted at any time of year depending on resource objectives and prescription. However, the normal prescribed fire season begins approximately April 1, and ends by May 31, due to early bird nesting. Fall burning may begin again August 15, and end October 31.

Prescribed fire complexity on the Refuge will be determined by the Region's Fire Complexity Analysis. All prescribed fires currently being considered are of low complexity; however, moderate to high complexity burns are possible in the future.

Existing firebreaks will be used. They may undergo minor improvements such as graveling or rotoavation (vegetation disruption). General policy dictates that any new firebreaks or below surface improvements to existing firebreaks will be approved by the Regional Historic Preservation Officer.

The Refuge Biologist will be responsible for supervising the development of resource management objectives for individual units. The Refuge staff will provide assistance in the selection of the appropriate management tool needed to meet objectives. Prescribed fire is just one of a combination of tools available. If needed, the Zone Fire Management Officer will be consulted for assistance in developing a prescription that will achieve the desired results.

A burn plan will be written that will document the treatment objectives, the prescription, and the plan of action for carrying out the burn. Burn plans can be written by any qualified burn boss. The burn plan will follow the format in the Service's Fire Management Handbook or a format approved by the Regional Fire Management Coordinator and address all aspects as specified in the Service's Fire Management Handbook. All burn plans will be reviewed by the Assistant Refuge Manager, Zone FMO, and approved by the Refuge Manager prior to implementation.

### Fire Prevention and Detection

Although fire may have historically played a role in the development of habitats on Necedah National Wildlife Refuge, human ignited fires and natural ignitions burning without a prescription are likely to result in unwanted damage to cultural and/or natural resources. In order to prevent wildfire, an educational program will be utilized to reduce the threat of human caused fires.



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Ongoing monitoring will be conducted by refuge staff, visitors, and cooperators to detect fire ignitions. Actions taken to implement this include:

- Fire prevention will be discussed at safety meetings, prior to the fire season, and during periods of high fire danger. Periodic training of staff in regards to fire prevention will be conducted.
- During periods of extreme fire danger, warnings will be posted at visitor information stations.
- Public contacts will be made via press releases and verbal contacts during periods of extreme fire danger.
- A thorough investigation will be conducted of all fires suspected to have been illegally set. Upon completion of the investigation, appropriate action will be taken.
- The Refuge relies on neighbors, visitors, cooperators, and staff to detect and report fires. In addition, the step-up plan provides for increased patrols by refuge personnel during periods of very high and extreme fire danger.
- All fires occurring within or adjacent to (within two miles) the Refuge will be reported to Refuge headquarters. The person receiving the report will be responsible for implementing the Fire Dispatch Plan (Appendix I) and assume duties of Fire Dispatcher until relieved or released.
- For local fires, the Fire Dispatcher will stay on duty until: (1) all Refuge resources return; (2) relieved by another dispatcher; or (3) advised by IC that he/she can leave. The Fire Dispatcher will not be required to stay on duty if the fire occurs outside Refuge radio coverage but the dispatcher must notify the State of Wisconsin Dispatcher (1-715-421-7841) that a Dispatcher is not on duty at the Refuge before leaving.
- The Fire Dispatcher will be responsible for coordinating the filling and delivery of any resource orders made by the Incident Commander (IC) for all operational and logistical needs, including engines, aircraft, tools, supplies, and meals. The IC will place all resource orders through the Dispatcher, and specify what is needed, when it is needed, and where it is needed. The Dispatcher will promptly determine if the resource orders can be filled or procured locally and notify the IC. If a resource order can not be filled locally, the Dispatcher will place the order with the Nicollet Interagency Fire Dispatcher in Woodruff, Wisconsin (715-358-6863). The Zone FMO for Necedah will generally be able to assist with ordering resources from outside the area.
- Requests for assistance by cooperators on fires not threatening the Refuge must be made to the Refuge Manager or designee. Only qualified and properly equipped resources meeting NWCG standards will be dispatched off of the Refuge.
- Firefighter and public safety always take precedence over property and resource protection during any fire management activity. Under moderate to severe fire danger index ratings, flaming fronts are capable of moving at fast speeds in all fuel models. In order to eliminate safety hazards to the public, all public access into the burn units will be closed the day of the burn. Fire crews





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will be briefed that should an individual who is not a member of the fire crew be observed in the prescribed burn unit, they will be immediately escorted out of the area. The fire crew will keep the fire scene clear of people except for Service firefighters and cooperating fire crews.

### Fire Suppression

Service policy requires the Refuge to utilize the ICS system and firefighters meeting NWCG qualifications for fires occurring on Refuge property. All suppression efforts will be directed towards safeguarding life while protecting the Refuge's resources and property from harm. Mutual aid resources responding from Cooperating Agencies will not be required to meet NWCG standards, but must meet the standards of their Agency. Mutual aid resources will report to the IC (in person or by radio) and receive their duty assignment. Mutual aid forces will be first priority for release from the fire. If additional firefighters are needed, appropriate procedures will be used to acquire them.

All fires occurring on the Refuge and staffed with Service employees will be supervised by a qualified IC. The IC will be responsible for all management aspects of the fire. If a qualified IC is not available, one will be ordered through the Wisconsin Rapids area office dispatch center or the Necedah Ranger Station. All resources will report to the IC (either in person or by radio) prior to deploying to the fire and upon arrival to the fire. The IC will be responsible for: (1) providing a size-up of the fire to dispatch as soon as possible; (2) determine the resources needed for the fire; and (3) advising dispatch of resource needs on the fire.

The IC will receive general suppression strategy from the Fire Management Plan, but appropriate tactics used to suppress the fire will be up to the IC to implement. Minimum impact suppression tactics (MIST) will be used whenever possible.

Severity funding may be essential to provide adequate fire protection for the Refuge during periods of drought, as defined by the Palmer Drought Index or other appropriate drought indicators. Severity funds may be used to hire additional firefighters, extend firefighter seasons, or to provide additional resources. The Service Fire Management Handbook provides guidelines for use of severity funding.

The incident commander (IC) on a wildland fire or the prescribed fire burn boss on a prescribed burn will be responsible for the completion of a DI-1202 Fire Report as well as Crew Time Reports for all personnel assigned to an incident and return these reports to the Assistant Manager. The IC or burn boss should include a list of all expenses and/or items lost on the fire and a list of personnel assignments on the DI-1202. The Zone FMO will enter all data into the FMIS computer database within 10 days after the fire is declared out. The Zone FMO will also inform the timekeeper of all time and premium pay to be charged to the fire and ensure expended supplies are replaced. In addition, the following provisions will apply:

- Utilize existing roads and trails, bodies of water, areas of sparse or non-continuous fuels as primary control lines, anchor points, escape routes, and safety zones.
- When appropriate, conduct backfiring operations from existing roads and natural barriers to halt the spread of fire.



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- Use burnouts to stabilize and strengthen the primary control lines.
- Depending upon the situation, either direct or indirect attack methods may be employed. The use of backfire in combination with allowing the wildfire to burn to a road or natural firebreak would be least damaging to the environment. However direct attack by constructing control lines as close to the fire as possible may be the preferred method to establish quicker control.
- Retardants may be used on upland areas.
- Constructed fire line will be rehabilitated prior to departure from the fire or scheduled for rehabilitation by other non-fire personnel.
- The Incident Commander will choose the appropriate suppression strategy and technique. As a guide: On low intensity fires (generally flame lengths less than 4 feet) the primary suppression strategy will be direct attack with hand crews and engines. If conditions occur that sustain higher intensity fires (those with flame lengths greater than 4 feet) then indirect strategies which utilize back fires or burning out from natural and human-made fire barriers may be utilized. Those barriers should be selected to safely suppress the fire, minimize resource degradation and damage and be cost effective.
- The use of earth moving equipment for suppression activities (dozers, graders, plows) on the Refuge will not be permitted without the approval of the Refuge Manager or his/her designated representative in the event of their absence.
- All areas in which wildfires occur on the Refuge or Refuge administered lands will be evaluated prior to the aerial or ground application of foams and/or retardants. Only approved chemical foams and retardants will be used (or not used) in sensitive areas such as those with riparian vegetation.
- Hazard reduction prescribed fires may be used in fire adapted communities that have not had significant fire for more than twice the normal fire frequency for that community type.
- Utilization of heavy equipment during high intensity fires will be allowed only with the approval of the Refuge manager.
- Wildland fire use for resource benefit will not be utilized.
- Engines will remain on roads and trails to the fullest extent possible.
- Whenever it appears a fire will escape initial attack efforts, leave Service lands, or when fire complexity exceeds the capabilities of command or operations, the IC will take appropriate, proactive actions to ensure additional resources are ordered. The IC, through dispatch or other means, will notify the Complex FMO of the situation. With Zone FMO assistance the Refuge Manager will complete a Wildland Fire Situation Analysis (WFSa) and Delegation of Authority
- The IC will be responsible for mop-up and rehabilitation actions and standards on Refuge fires. Refuge fires will be monitored until declared out.



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- Rehabilitation of suppression actions will take place prior to firefighters being released from the fire. Action to be taken include: 1) All trash will be removed; 2) Fire lines will be refilled and water bars added if needed; 3) Hazardous trees and snags cut and all stumps cut flush; and 4) Damage to improvements caused by suppression efforts will be repaired, and a rehabilitation plan completed if necessary. Service policy states that only damage to improvements caused by suppression efforts can be repaired with fire funds. Service funds cannot be used to repair damage caused by the fire itself (i.e. burnt fence lines). If re-seeding is necessary, it will be accomplished according to Service policy and regulations.

## 2. DESCRIPTION OF ALTERNATIVES

### 2.1 Alternative 1 (Status Quo)

Under Alternative 1, management direction at the Refuge relative to the needs and significant issues identified during the scoping and public involvement process (Chapter 1) would proceed in accordance with guidance contained in the 1979 Refuge Master Plan and subsequent step-down management plans (e.g., forest management plan, fire management plan, marsh and water management plan, public use plan, etc).

### Service Trust Resources

#### Listed Species

Under this alternative, the Refuge would continue protecting listed species and their habitats, including managing habitat to support one large population of Karner blue butterflies on Refuge land; managing habitat to support an experimental population of whooping cranes on or near the Refuge (an action that is covered by a separate EA prepared by the Service's Green Bay Ecological Service's Field Office); maintaining packs of eastern timber wolves on public land in central Wisconsin; and continuing management efforts for the eastern massasauga rattlesnake, including research (Refuge staff provide landowners in the Yellow River area, Monroe County, LaCrosse, and Buffalo County with eastern massasauga rattlesnake management support and surveys)(see CCP for a more detailed description).

#### Waterfowl and other Migratory Birds

The Refuge would continue to provide migratory habitat for waterfowl and other migratory birds as prescribed in the 1979 Master Plan and subsequent 1992 Marsh and Water Management Plan (mainly mid-migration habitat). However, the Refuge would not attempt to increase waterfowl use and production on the Refuge through management of additional nesting, resting, and feeding habitat (grasslands and wetlands)(the Refuge currently has roughly 400 breeding pairs of waterfowl). The Refuge would not attempt to increase the breeding pair population of grassland species of concern (e.g. dickcissel, upland sandpiper, grasshopper sparrow) through additional grassland habitat management. The Refuge would attempt to increase the breeding populations of savanna species of concern (e.g. red-headed woodpeckers, field sparrow, bobolinks) through additional savanna habitat management (per guidance contained in the Refuge's Forest



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Management Plan). The Refuge would maintain wood duck houses on Refuge land. Many bird species considered priority conservation species by the Service and the state, and which are found in the forested wetlands and associated habitats in the Yellow River Focus Area (cerulean warbler, red-shouldered hawk, acadian flycatcher, yellow-crowned night heron, sedge wren, prothonotary warbler, Louisiana waterthrush) would not be afforded any habitat protection under this alternative. All habitat work performed by Refuge staff in the Yellow River Focus Area would be through the Refuge's Partner's for Wildlife Program.

### Native Biological Diversity

Under alternative 1, the Refuge would manage for increased biological diversity on Refuge land by restoring and managing additional savanna habitat (per guidance contained in the Refuge's Forest Management Plan). However, since the Refuge would not take an active role in preserving habitat in the Yellow River Focus Area aside from its Partner's for Fish and Wildlife Program, the Refuge would not be restoring and preserving significant amounts of biological diversity in that area.

### **Visitor Services**

Under this alternative the Refuge would maintain its wildlife observation, photography, fishing, education, interpretation, and outreach programs at 1999 levels. Small game and deer hunting programs would be maintained at current levels also, until studies are available that show the number of hunters that can safely hunt Refuge land. Public use initiatives would focus primarily on updating existing signs, trails, piers and parking areas (per guidance contained in the 1979 Master Plan and public use plan). Refuge staff would continue to conduct outreach and environmental education programs consistent with the 1979 public use plan. The Refuge would enlarge its headquarters building to accommodate the additional needs of visitors, Refuge staff, and local and regional educators (per guidance contained in the 1979 Refuge master plan and public use plan). Note - any major construction activities aimed at enlarging the existing Refuge headquarters building would be covered by future NEPA compliance at the time of construction. Staffing patterns for this program would remain roughly the same.

### **Habitat Management**

The Refuge would maintain the status quo in habitat management on the Refuge with the exception of 2,600 acres of additional savanna, which would be restored by converting an equal amount of Refuge land currently in forest cover (see table 1 below)(per guidance contained in the Refuge's Forest Management Plan which currently serves as a guiding document for savanna restoration on the Refuge). Some wetlands may be restored on the Refuge and within the Refuge's Private Lands District in partnership with private landowners and other conservation organizations through the Refuge's Partners for Fish and Wildlife Program. No new grasslands would be established on the Refuge for nesting waterfowl and other migratory birds. The Refuge's role in restoration and management of habitats in the Yellow River Focus Area would be through technical assistance to landowners through the Refuge's Private Lands program. Thus, some small increases in habitat may occur as a result of this alternative. Fire as a management tool would be used to restore and maintain existing and restored savannas, as well as on existing Refuge grasslands, as described in the Refuge Fire Management Plan.

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| <b>TABLE 1<br/>Habitat Types on the Refuge by 2015 (Alternative 1)</b> |              |                            |
|--|--------------|----------------------------|
| <b>Land Cover Type</b>   | <b>Acres</b> | <b>Compared to 2000</b>    |
| Open Landscapes (grasslands and savannas)                              | 6,300 acres  | + 2,600 acres<br>(savanna) |
| Coniferous Forests   | 550 acres    | - 350 acres                |
| Mixed Deciduous and Coniferous Forests                                 | 8,000 acres  | - 2,000 acres              |
| Broad-leaf Deciduous Forests   | 5,350 acres  | - 250 acres                |
| Emergent Wetlands and Wet Meadows                                      | 10,500 acres | Status Quo                 |
| Forested Wetlands  | 5,700 acres  | Status Quo                 |
| Lowland Shrubs   | 5,500 acres  | Status Quo                 |
| Open Water Areas   | 1,800 acres  | Status Quo                 |

**Yellow River Focus Area**

Under this alternative, the Service would not pursue long-term conservation, restoration, and management of lands and waters within the Yellow River Focus Area (Figure 2). However, the Refuge would continue to intensify and concentrate its Partner's for Fish and Wildlife program in the area and continue developing Wildlife Management Agreements (Table 4) with landowners. As a result, some small increases in habitat could be attained through these efforts. No easement or fee-title acquisition of land by the Service would occur under this alternative. No land would be removed from the county/township tax rolls through federal fee-title acquisition of land.

**2.2 Alternative 2**

Under Alternative 2, management direction at the Refuge relative to the needs and significant issues identified during the scoping and public involvement process would proceed in accordance with guidance contained in the Refuge's 1979 Master Plan.

**Service Trust Resources**Listed Species

The Refuge would continue protecting listed species and their habitat as described above in alternative 1. However, under this alternative the Refuge would not attempt to establish one large population of Karner blue butterflies on Refuge land through additional savanna habitat management. The Refuge would manage habitat to support an experimental population of whooping cranes on or near the Refuge (an action that is covered by a separate EA prepared by the Service's Green Bay Ecological Service's Field Office). The Refuge would maintain habitat in support of eastern timber wolves, and would continue management efforts aimed at the recovery of the eastern massasauga rattlesnake, including research (Refuge staff provide



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landowners in the Yellow River area, Monroe County, LaCrosse, and Buffalo County with eastern massasauga rattlesnake management support and surveys).

FIGURE 2

### YELLOW RIVER FOCUS AREA

#### Waterfowl and other Migratory Birds

Under this alternative, the Refuge would continue to provide migratory habitat for waterfowl and other migratory birds as prescribed in the 1979 Master Plan (mainly mid-migration habitat). The Refuge would not attempt to increase waterfowl use and production at the Refuge through the management of additional nesting, resting, and feeding habitat (grasslands and wetlands)(the Refuge currently has roughly 400 breeding pairs). The Refuge would not attempt to increase the breeding pair population of grassland species of concern (e.g. dickcissel, upland sandpiper, grasshopper sparrow) through additional grassland habitat management. The Refuge would not attempt to increase the breeding populations of savanna species of concern (e.g. red-headed woodpeckers, field sparrow, bobolinks) through additional savanna habitat management (per guidance contained in the Refuge's Forest Management Plan). The Refuge would maintain artificial wood duck houses on Refuge land. Many bird species considered priority conservation species by the Service and that are found in the forested wetlands and associated habitats in the Yellow River Focus Area (cerulean warbler, red-shouldered hawk, acadian flycatcher, yellow-crowned night heron, sedge wren, prothonotary warbler, Louisiana waterthrush) would not be afforded any habitat protection. The Refuge would not develop any additional management agreements with landowners in the Yellow River area.

#### Native Biological Diversity

No new efforts would be made to manage for increased biological diversity on either Refuge land or land within the Yellow River Focus Area. No new wetlands, grasslands, or savannas would be restored and managed on Refuge land or by Refuge staff on land within the Yellow River Focus Area.

#### **Visitor Services**

The Refuge would maintain its wildlife observation, photography, fishing, education, interpretation, and outreach programs at 1999 levels. Small game and deer hunting programs would be



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maintained at current levels, until studies are complete that identify the number of hunters that can safely hunt on the Refuge. No new trails, observation towers, fishing piers, or major facilities would be developed. Refuge staff would continue to conduct outreach and environmental education programs consistent with guidance contained in the 1979 Master Plan. Visitor facilities and office space would remain status quo at the present headquarters building. No additional classrooms, meeting space, or staff facilities would be developed under this alternative. Staffing patterns for this program would remain the same.

### Habitat Management

The Refuge would maintain the status quo in habitat management (see Table 2 below). However, some small wetlands may be restored in partnership with private landowners and other conservation organizations within the Refuge's Private Lands District. The Refuge would not intensify and concentrate habitat restoration and management activities in the Yellow River Focus Area. Fire as a management tool would be used to restore and maintain existing Refuge savannas and grasslands, as described in the Refuge Fire Management Plan.

| <b>TABLE 2</b><br><b>Habitat Types on the Refuge by 2015 (Alternative 2)</b> |                   |                         |
|--|-------------------|-------------------------|
| <b>Land Cover Type</b>   | <b>2015 Acres</b> | <b>Compared to 2000</b> |
| Open Landscapes (grasslands, savanna, shrublands, old fields)                | 3,700 acres       | Status Quo              |
| Coniferous Forests   | 900 acres         | Status Quo              |
| Mixed Deciduous and Coniferous Forests                                       | 10,000 acres      | Status Quo              |
| Broad-leaf Deciduous Forests   | 5,600 acres       | Status Quo              |
| Emergent Wetlands and Wet Meadows  | 10,500 acres      | Status Quo              |
| Forested Wetlands  | 5,700 acres       | Status Quo              |
| Lowland Shrubs   | 5,500 acres       | Status Quo              |
| Open Water Areas   | 1,800 acres       | Status Quo              |

### The Yellow River Focus Area

Under this alternative, the Service would not pursue long-term conservation, restoration, and management of lands and waters within the Yellow River Focus Area. No easement or fee-title acquisition of land would occur under this alternative. The Refuge would not intensify and concentrate its Partners for Fish and Wildlife program in the Yellow River Focus Area. The Refuge would not develop any additional Wildlife Management Agreements with landowners in the Yellow River Focus Area.



## Description of Alternatives

### 2.3 **Alternative 3 (Preferred Alternative)**

Under Alternative 3, future management direction at the Refuge relative to the needs and significant issues identified during the scoping and public involvement process would be guided by the goals, objectives, strategies, and projects contained in the attached CCP.

#### **Service Trust Resources**

##### Listed Species

The Refuge would continue protecting listed species and their habitat as described above in alternative 1. This would include: managing habitat to support one large population of Karner blue butterflies on Refuge land; managing habitat to support an experimental population of whooping cranes on or near the Refuge (an action that is covered by a separate EA prepared by the Service's Green Bay Ecological Service's Field Office); managing habitat to maintain packs of eastern timber wolves on public land in central Wisconsin; and continuing management efforts aimed at the recovery of the eastern massasauga rattlesnake, including research (Refuge staff provide landowners in the Yellow River area, Monroe County, LaCrosse, and Buffalo County with eastern massasauga rattlesnake management support and surveys).

##### Waterfowl and other Migratory Birds

Under this alternative, the Refuge would increase the waterfowl breeding pair population to 700 pairs on Refuge land through additional grassland habitat management (the Refuge currently has roughly 400 breeding pairs). The Refuge would also increase the breeding pair population of grassland species of concern (e.g. dickcissel, upland sandpiper, grasshopper sparrow) through additional grassland habitat management, as well as increase the breeding pair population of savanna species of concern (e.g., red-headed woodpecker, field sparrow, bobolink) through additional savanna habitat management. The Refuge would eliminate wood duck houses on Refuge land in favor of artificial nesting cavities. The Refuge would increase the breeding pair population of black terns on Refuge land through additional wetland habitat management. The Refuge would increase the breeding pair population of goshawks on Refuge land.

##### Native Biological Diversity

Under Alternative 3, the Refuge would manage for increased biological diversity by restoring and managing additional wetland, grassland, and savanna habitats on the Refuge and within the Yellow River Focus Area, including seasonal wetlands, wet meadows, native prairies, and riparian associations (see Table 3 in the habitat management section below). Guiding these restorations are several "Guiding Principles" found in Chapter 4 of the CCP.

#### **Visitor Services**

Under this alternative the Refuge would expand its wildlife observation, photography, fishing, education, interpretation, and outreach programs by roughly 10-20 percent over 1999 estimates (measured in visitor use-days). Small game and deer hunting programs would be maintained at





## Description of Alternatives

current levels, until studies identify the number of hunters that can safely hunt Refuge land. Several notable upgrades to facilities (Figure 3, page 33) and services would occur under this alternative to provide for increased use of the Refuge (see Chapter 5 in the CCP for a complete description of projects). These would include:

- Project 23 - developing an observation tower at Carpenter Field to enhance wildlife viewing opportunities
- Project 24 - developing and maintaining two additional off-road parking areas on the Refuge
- Project 25 - developing a fishing pier at Harvey's Pond to enhance Refuge fishing opportunities
- Project 26 - completing the Ellen Allen Outdoor Learning Center to facilitate on-site outdoor learning opportunities
- Project 28 - developing new signage that welcomes and orients visitors to the Necedah Wildlife Management Area
- Project 29 - developing five additional miles of interpretive trails on the Refuge
- Project 30 - designing and erecting new signs on the Refuge, including two interpretive kiosks and site interpretation signage
- Project 32 - designing and building a new visitor center to serve as a first point of contact for Refuge visitors, office space for Refuge staff, and classrooms and meeting space for educators.

The proposed location for the visitor center is an upland sight north of State Highway 21 and east of Headquarters Road (see Figure 3). The current land cover is unrestored savanna, which would be restored in conjunction with construction of the visitor center. The restoration would benefit Service trust resources such as the Karner blue butterfly and migratory birds that use savannas and grasslands. The proposed center would have the following facilities, rooms, features:

### Facility:

- The building would have a footprint of approximately 20,000 sq. ft, with additional square footage in the basement.
- Single story, above ground, universally accessible.
- Basement with walk-out entrance, universally accessible.
- Stone siding.
- Pond/recycling "natural sewage system.
- Geothermal heating and cooling.
- Drilled well.
- Stone/tile flooring.
- Pine paneling harvested from Refuge Civilian Conservation Corps pine plantations.
- Parking area (approximately 35,000 sq. ft) and would include space for buses, Rvs, and vehicles with trailers.



## Description of Alternatives

### Rooms:

- Reception area with desk.
- Activity area.
- Auditorium with seating for 100-150.
- Conference room which can be divided into two rooms.
- Full kitchen.
- Gift shop.
- Public restrooms (six stalls each).
- Four office spaces (staff: 2, volunteer coordinator: 1, Friends of Necedah: 1).
- Staff restrooms.
- Staff break room.
- Utility room (basement).
- Storage area (basement).
- Delivery area (basement).

### Outdoor Features:

- Hiking and cross-country ski trails.
- Demonstration garden with interpretive signs.
- Landscaping with native flora.
- Bird feeders.
- Outdoor theater
- Picnic area.
- Porch/deck area
- Outdoor seating

• Project 33 - constructing one additional universally accessible fishing pier, hunting blind, and hard surface trail or boardwalk, and

• Project 34 - developing universally accessible versions of brochures (braille) and videos (close-captioned), and

• Project 41 - developing housing to accommodate Refuge volunteers and other stakeholders living outside the commuting area (in this case the Refuge would remodel the Annex building to serve as volunteer housing).

### Habitat Management

Under this alternative, clear goals and objectives that incorporate the most current resource management information would be used to guide habitat management on the Refuge. Habitat management objectives were developed using soils information and historical survey data, or were developed in response to management objectives for a particular species or population. In all cases, the planning team used the best information available to identify land that could be restored, enhanced, or converted to some other use.

As proposed in the CCP, the Refuge would restore and/or establish two additional 1,000-acre wetland complexes; 3,500 acres of new grasslands; 2,600 acres of new savannas; and reduce



## Description of Alternatives

forest land by roughly 6,100 acres (see Table 3 below). In addition, Sprague-Mather Pool would be divided to enhance water management capability. Figure 14 in the CCP is a map of the Refuge's desired future habitat management condition (long-term). It combines ecological information (soils data) relative to what the Refuge can naturally support with other factors such as budgets and opportunities and issues identified by the Refuge and its stakeholders during the CCP scoping process. This information together was used to create a blueprint of what the Refuge landscape might look like in the future. Built into the desired future condition were several key management assumptions (Chapter 3 of the CCP). Like alternative 1 and 2, fire as a management tool would be used to restore and maintain Refuge savanna and grasslands.

| <b>TABLE 3</b><br><b>Habitat Types on the Refuge by 2015 (Alternative 3)</b> |              |  |
|--|--------------|--|
| <b>Land Cover Type</b>   | <b>Acres</b> | <b>Compared to 2000</b>                          |
| Open Landscapes (grasslands and savannas)                                    | 9,800 acres  | + 2,600 acres savanna<br>+ 3,500 acres grassland |
| Coniferous Forests   | 550 acres    | - 350 acres                                      |
| Mixed Deciduous and Coniferous Forests                                       | 4,500 acres  | - 5,500 acres                                    |
| Broad-leaf Deciduous Forests   | 5,350 acres  | - 250 acres                                      |
| Emergent Wetlands and Wet Meadows  | 12,500 acres | + 2,000 acres                                    |
| Forested Wetlands  | 5,700 acres  | Status Quo                                       |
| Lowland Shrubs   | 3,500 acres  | - 2,000 acres                                    |
| Open Water Areas   | 1,800 acres  | Status Quo                                       |

FIGURE 3

Visitor Center/Other projects



## Description of Alternatives

### Yellow River Focus Area

Under Alternative 3, the Refuge would pursue long-term restoration, preservation, and management of lands within the Yellow River Focus Area (Figure 2). Over the next 15 years, 3,750 acres of wetlands, uplands, and riparian areas could be protected and conserved by the Service through technical assistance to Yellow River landowners, voluntary partnership agreements, conservation easements and fee acquisition programs. Restoration and conservation would occur at a rate of approximately 250 acres/year assuming the presence of willing participants and the availability of funds (best guess estimate). The Refuge would also take a leadership role in fostering improved communication and collaboration between Service programs, landowners, state, county and local governments, non-government organizations, commercial interests, and others to benefit the Yellow River ecosystem. This strategy will be pursued in conjunction with the Central Wisconsin Basin Partnership. Again, the Refuge would purchase conservation easements and fee-title acquisitions from willing sellers only in the Yellow River Focus Area. The Refuge would also continue developing Wildlife Management Agreements with willing landowners in the area.

Table 4 discusses some of the types of acquisition the Service could use. A more detailed description follows the table.

| <b>TABLE 4</b><br><b>Service Land Acquisition Tools</b>   |  |
|---|--|
| Fee Title -   | the acquisition of all land ownership rights   |
| Conservation Easements -                                  | the acquisition of part of the surface land ownership rights. Such easements are usually perpetual.                |
| Jurisdictional Transfer -                                 | the transfer of surface management from one Federal agency to another.   |
| Cooperative Agreement/<br>Wildlife Management Agreement - | short term agreements with landowners to accomplish specific management objectives.                                |
| Lease -   | short term or long term "rental" of land for management. This usually includes periodic payments to the landowner. |
| Donation -  | gift of land or interest in land without monetary reimbursement.   |

*Fee-simple acquisition* involves acquisition of most or all of the rights to a persons land. There is a total transfer of property with the formal conveyance of a title to the Federal government. While fee acquisition involves most of the rights to a property, certain rights may be withheld or not purchased (water rights, mineral rights, use reservations).



## Description of Alternatives

*Conservation Easements* involves the acquisition of certain rights that can be of value for the purpose of achieving fish and wildlife habitat objectives (usually prohibiting or encouraging certain practices (right to drain a wetland or delay haying harvest). Easements become part of the title to the property and are usually permanent. If a landowner sells his or her property, the easement continues as part of the title. Based on conversations with landowners in the Yellow River Focus Area, this mechanism offers the most promise relative to landowner participation.

*Cooperative Agreements/Wildlife Management Agreements* are negotiated between the Service and other government agencies, conservation groups, or individuals. An agreement usually specifies a particular management action or activity the landowner will do, or not do, on his or her property. For example, a simple agreement would be for the landowner to agree to delay hayland mowing until after a certain date to allow ground nesting birds to hatch their young. More comprehensive agreements are possible for such things as wetland or upland restoration, or public access. Agreements are strictly voluntary on the part of the landowner and are not legally binding. As long as a landowner abides by the terms of the agreement, this protection can be effective in meeting certain objectives. Unfortunately, because these agreements are voluntary and can be modified, they do not offer the Service or the American public perpetual protection.

*Lease Agreements* are short-term agreements for full or specified use of the land in return for an annual rental payment that generally includes occupancy rights. For example, the Service could lease 40 acres of grassland habitat to provide safe nesting for ground nesting birds. The landowner would not be able to hay or otherwise disturb the ground during the lease period.

**Description of Alternatives****3. SUMMARY AND COMPARISON OF ALTERNATIVES**

| <b>TABLE 5<br/>Summary and Comparison of Alternatives</b> |  |   |  |
|---|--|---|--|
| <b>ACTION</b>   | <b>ALTERNATIVE 1<br/>(Guidance contained in<br/>the 1979 Master Plan<br/>and associated Step-<br/>down Management<br/>Plans)</b>   | <b>ALTERNATIVE 2\<br/>(Guidance contained in<br/>the 1979 Master Plan)</b>  | <b>ALTERNATIVE 3<br/>(Guidance contained in<br/>the Refuge CCP)</b>  |
| 1. Service Trust<br>Resources                             |  |   |  |
| - Listed Species  | Would continue protecting all listed species and their habitats, including restoration and management of their habitats.   | Would continue protecting all listed species and their habitats. However, the Refuge would not attempt to establish one large population of Karner blue butterflies on Refuge land through additional savanna habitat management. | Would continue protecting all listed species and their habitats, including restoration and management of their habitats..  |
| - Waterfowl and other<br>Mig. Birds                       | Would not increase waterfowl use and production. Would not increase grassland species of concern. Would increase savanna species of concern through additional savanna management. | Would not increase waterfowl use and production. Would not increase grassland species of concern. Would not increase savanna species of concern through additional savanna management.  | Would increase waterfowl use and production through additional habitat management. Would increase grassland species of concern through additional grassland management. Would increase savanna species of concern through additional savanna management. |



## Description of Alternatives

| <b>TABLE 5</b><br><b>Summary and Comparison of Alternatives</b> |   |   |   |
|---|---|---|---|
| - Biological Diversity  | Would manage for increased biological diversity only through savanna restoration efforts on Refuge land and through the Private Lands Program in the Yellow River Focus Area..                                    | Would not manage for increased biological diversity on either Refuge land or land within the Yellow River Focus Area.   | Would manage for increased biological diversity on both Refuge land and within the Yellow River Focus Area through additional wetland, grassland, and savanna habitat restoration.  |
| 2. Visitor Services   | Refuge visitor services would remain at 1999 levels. No new trails, observation towers, fishing piers, or major facilities would be developed. Headquarters building would be enlarged to accommodate staff.      | Refuge visitor services would remain at 1999 levels. No new trails, observation towers, fishing piers, or major facilities would be developed. Headquarters building would remain the same and would not be enlarged. | Visitor Services would be expanded by roughly 20 percent over 1999 levels. Many upgrades to existing facilities would occur. New headquarters building/visitor center would be constructed.   |
| 3. Habitat Management   | Maintains status quo in habitat management with the exception of 2,600 acres of new savanna. Forest land would be reduced by an equal amount. No new grasslands or wetlands would be developed for nesting birds. | Maintains status quo in habitat management. No new wetlands, grasslands, or savannas would be developed for nesting birds.  | Open landscape land would increase (grasslands/savannas) by 6,100 acres. Emergent wetlands and wet meadows would increase by 2,000 acres. Coniferous, broad-leaf, and mixed forests would decrease by 6,100 acres. Lowland shrubs would decrease by 2,000 acres |
| - Fire Management Plan  | Adopted   | Adopted   | Adopted   |



## Description of Alternatives

| <b>TABLE 5</b><br><b>Summary and Comparison of Alternatives</b> |  |  |   |
|---|--|--|---|
| 4. Yellow River Focus Area                                      | Would continue private lands program in YRFA developing Wildlife Management Agreements with willing landowners; no easements or fee-title purchases of land. | Would discontinue private lands program in YRFA. No new Wildlife Management Agreements would be developed with willing landowners. No easement or fee-title purchases of land would occur. | The Refuge would purchase conservation easements and fee-title purchases from willing sellers. Wildlife Management Agreements would be developed with willing landowners. |